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Mineral Industry Surveys

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MOLYBDENUM IN JULY 2005

Domestic production of molybdenum in concentrate in July 2005 was about 5% more than that of the previous month and was about 53% more than that of July 2004, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 5,930 metric tons (t) at the beginning of 2005 and 6,400 t at the end of July.

According to Ryan's Notes (2005b), the July monthly average prices for U.S. ferromolybdenum (FeMo) ranged from $37.000 to $38.556 per pound of molybdenum content, compared with $41.563 to $43.063 in June. European FeMo monthly averages ranged from $76.111 to $78.222 per kilogram (kg) of molybdenum content in July as compared with $90.500 to $92.875 in June. In July, worldwide molybdenum oxide (MoO_3) prices ranged from $29.944 to $31.111 per pound versus $36.938 to $38.000 in June.

Canadian metals producer Falconbridge Ltd. (Toronto) modified a former copper roaster at its Altonorte Smelter near Antofagasta in northern Chile to roast molybdenum concentrates. The plant began MoO_3 production on June 29 and achieved its design production capacity of 32 metric tons per day in less than 2 weeks. The modified plant could produce 10,000 t of molybdenum oxide annually. Falconbridge contracted with Codelco, Chile's national copper company, to roast molybdenum concentrates from Codelco's Chuquicamata Mine (Platts Metals Week, 2005a).

Eureka Mining Plc. (London, UK) expected to produce molybdenum concentrates from its Shorskoye project in Kazakhstan in early 2006, following the signing of a joint-venture agreement with KazAtomProm, the state uranium company of Kazakhstan. Under terms of the agreement, Eureka would use KazAtomProm's Stepnogorsk industrial plant facilities to process molybdenum concentrates from Shorskoye in exchange for a 50% interest in Ar-Man, Eureka's wholly-owned subsidiary, which owns Shorskoye (Platts Metals Week, 2005b).

Instead of anticipating a drop in demand or a surge in production, molybdenum sellers have watched China to anticipate the future direction of the market. China's molybdenum exports showed little variation in the January through May period, a marked difference from 2004, when exports varied between 900 t (2 million pounds) and 5,400 t (12 million pounds) monthly. Monthly exports averaged about 2,800 t (6.2 million pounds) in 2005 as compared with about 3,500 t (7.6 million pounds) over the same period in 2004. Even though many mines are still shut in the Huludao Region owing to flooding, environmental problems, and government enforcement of tax laws, FeMo converters have supplemented domestic ore supplies with imported concentrates. In the first 5 months of 2005, China imported about 4,100 t (9 million pounds) of Western concentrates as compared with about 1,600 t (3.5 million pounds) in all of 2004 (Ryan's Notes, 2005a).

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, U.S. consumption by end use, stocks of molybdenum material in June and July 2005, and trade data for May and June 2005.

References Cited

Platts Metals Week, 2005a, Chile moly roaster starts up: Platts Metals Week, v. 76, no. 29, July 18, p. 6.
Platts Metals Week, 2005b, Eureka eyes moly output from Kazakh project: Platts Metals Week, v. 76, no. 30, July 25, p. 1.
Ryan's Notes, 2005a, China could hold clue to Mo: Ryan's Notes, v. 11, no. 28, July 11, p. 4.
Ryan's Notes, 2005b, [untitled]: Ryan's Notes, v. 11, no. 31, August 1, p. 10.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS[1]

(Metric tons, contained molybdenum)

	2004		2005		
	January-December[p]	January-July	June	July	January-July
Production	42,100	22,400	4,780	5,010	32,300
Shipments:[2]					
Domestic	31,100	17,200	3,400	3,230	21,200
Export	11,100	5,640	1,860	1,470	10,800

[p]Preliminary.
[1]Data are rounded to no more than three significant digits.
[2]As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS[1]

(Metric tons, contained molybdenum)

	2004		2005		
	January-December[p]	January-July	June	July	January-July
Gross production	66,300	34,800	6,890	7,960	47,900
Internal consumption[2]	42,000	21,900	4,190	5,290	30,400
Gross shipments	39,300	21,400	3,840	4,010	28,000

[p]Preliminary.
[1]Data are rounded to no more than three significant digits.
[2]Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3

U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS[1]

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb-denum[2]	Ammonium and sodium molybdate	Molyb-denum scrap	Other	Total
2005, June:						
Steel:						
Carbon	9,910	W	--	--	W	9,910
High-strength low-alloy	34,700	8,110	--	--	11,300	54,100
Stainless and heat-resisting	153,000	66,400	--	W	6,510	226,000
Full alloy	153,000	199,000	--	--	1,510	354,000
Tool	74,700	W	--	--	--	74,700
Total	426,000	273,000	--	W	19,400	719,000
Cast irons (gray, malleable, and ductile iron)	W	9,010 r	--	--	763	9,770 r
Superalloys	84,700	W	--	(3)	113,000	198,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	181	7,890	--	--	11	8,090
Mill products made from metal powder [4]	--	--	--	--	161,000	161,000
Cemented carbides and related products[5]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,900	10,900
Other	1,090	32,300	73,400	1,840	16,800	125,000
Grand total	589,000	323,000	73,400	1,840	322,000	1,310,000
Stocks, June 30, 2005	466,000	204,000 r	4,540	47,800	850,000	1,570,000 r
2005, July:						
Steel:						
Carbon	10,100	W	--	--	W	10,100
High-strength low-alloy	35,400	9,190	--	--	11,300	55,900
Stainless and heat-resisting	160,000	66,400	--	W	6,510	233,000
Full alloy	149,000	223,000	--	--	1,510	374,000
Tool	57,200	W	--	--	--	57,200
Total	412,000	299,000	--	W	19,400	730,000
Cast irons (gray, malleable, and ductile iron)	W	9,550	--	--	763	10,300
Superalloys	103,000	W	--	(3)	120,000	224,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	80	5,150	--	--	11	5,240
Mill products made from metal powder [4]	--	--	--	--	167,000	167,000
Cemented carbides and related products[5]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	2,050	2,050
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,000	11,000
Other	1,090	34,500	73,500	1,840	16,800	128,000
Grand total	594,000	348,000	73,500	1,840	338,000	1,350,000
Stocks, July 31, 2005	444,000	217,000	3,630	32,600	848,000	1,540,000

rRevised. W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes calcium molybdate.

[3]Included in "Other" of the "Superalloys" category.

[4]Includes ingot, wire, rod, and sheet.

[5]Includes construction, mining, oil and gas, metalworking machinery.

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY[1]

(Kilograms, contained molybdenum)

	2004		2005		
Country	January-December	January-June	May	June	January-June
Australia	30,500	19,000	9,180	--	91,400
Austria	1,310,000	421,000	--	--	2,590
Belgium	6,470,000	2,640,000	1,140,000	562,000	2,580,000
Brazil	31,000	11,300	3,180	58,800	66,100
Canada	1,370,000	607,000	502,000	448,000	2,220,000
Chile	1,380,000	1,060,000	849	--	111,000
China	36,000	--	590,000	673,000	2,420,000
Costa Rica	26,700	21,300	570	617	3,810
India	430	--	--	--	34,400
Italy	--	--	--	--	35,100
Japan	5,730,000	1,680,000	120,000	298,000	934,000
Korea, Republic of	95,200	51,200	--	5,640	11,400
Mexico	3,910,000	988,000	96,200	69,900	1,070,000
Netherlands	14,100,000	5,680,000	569,000	2,260,000	8,980,000
Sweden	38,200	--	--	--	--
Taiwan	19,200	11,100	--	--	3,600
United Kingdom	8,910,000	4,200,000	--	581,000	3,720,000
Other	2,770,000	941,000	170,000	285,000	599,000
Total	46,200,000	18,300,000	3,200,000	5,240,000	22,900,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY[1]

(Kilograms, contained molybdenum)

	2004		2005		
Country	January-December	January-June	May	June	January-June
Australia	1,090	1,090	--	--	--
Brazil	--	--	7,380	1,830	16,600
Canada	870,000	520,000	324,000	365,000	1,210,000
France	10,100	--	--	--	--
Indonesia	381	--	--	--	5,930
Mexico	33,700	19,300	--	408	4,940
Netherlands	--	--	--	--	33,300
Sweden	9,150	--	--	--	--
United Kingdom	491	491	--	--	--
Total	925,000	540,000	331,000	367,000	1,270,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS[1]

(Kilograms, unless otherwise specified)

	January-December 2004			June 2005			January-June 2005		
Material	Gross weight	Contained molybdenum	Value[2] (thousands)	Gross weight	Contained molybdenum	Value[2] (thousands)	Gross weight	Contained molybdenum	Value[2] (thousands)
Ore and concentrates roasted	7,580,000	4,710,000	$133,000	407,000	254,000	$21,100	4,580,000	2,860,000	$202,000
Ore and concentrates other	9,330,000	4,070,000	135,000	1,170,000	581,000	42,100	7,570,000	3,430,000	243,000
Molybdenum chemicals:									
Oxides and hydroxides	822,000	NA	15,800	39,300	NA	2,280	663,000	NA	19,600
Molydates of ammonium	1,940,000	1,330,000	18,400	698,000	426,000	7,300	2,230,000	1,470,000	26,100
Molydates (all others)	254,000	116,000	1,430	1,620	397	26	65,000	16,800	916
Molybdenum orange	1,030,000	NA	4,760	66,800	NA	334	436,000	NA	2,330
Ferromolybdenum	8,310,000	5,310,000	158,000	397,000	258,000	20,900	3,440,000	2,190,000	150,000
Molybdenum powders	139,000	95,200	4,930	7,760	7,110	625	38,800	33,600	3,200
Molybdenum unwrought	151,000	151,000	3,520	10,000	9,980	550	24,000	23,900	1,520
Molybdenum waste and scrap	454,000	415,000	10,200	91,300	89,600	7,100	298,000	290,000	21,400
Molybdenum wire	20,500	NA	2,010	2,430	NA	392	11,400	NA	1,740
Molybdenum other	132,000	NA	13,700	4,510	NA	924	67,600	NA	9,060
Total	30,200,000	16,200,000	501,000	2,890,000	1,630,000	104,000	19,400,000	10,300,000	681,000

NA Not available.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Customs value.

Source: U.S. Census Bureau.